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 TITLE: Polyester
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BE 748781	A	19700916	BE 1970-748781	19700410

NL 7005224	A	19710202	NL 1970-5224	19700410
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AB A catalyst mixture containing 0.005-0.5 weight % amorphous or hexagonal GeO₂ [1310-53-8] or germanium tetraethoxide [14165-55-0], Sb [7440-36-0] to prevent loss of Ge (0.1-2.0 Sb per Ge; particle diameter <100-μ), Ca(OAc)₂ or Zn(OAc)₂, and optionally containing trimethyl phosphate was useful for polycondensation of compns. containing dimethyl terephthalate (I) or mixts. of I and dimethyl isophthalate, and ethylene glycol (II) to give polyesters with improved whiteness. Thus, a mixture containing I 40, II 30, Ca(OAc)₂ 0.02, and Sb 0.006 g was heated at 190-210.deg. to cause ester-exchange reaction. After removal of MeOH formed the mixture was heated to 250.deg. to remove excess II. Amorphous GeO₂ (0.01 g) was added and the composition was heated 1 hr at 285.deg. and 0.5-mm to give a white polymer [25038-59-9], intrinsic viscosity (1:1 PhOH-C₂H₂Cl₄ mixture, 25.deg.), 0.735, softening temperature 258.deg., compared to 0.624 and 251.deg., resp., for a polymer prepared from a similar composition in the absence of Sb, and 0.633 and 253.deg., resp., for a polymer prepared from a similar composition containing SbPh₃ instead of Sb; the proportion of GeO₂ retained in the product was 76%, compared to 40% for polycondensation of a similar composition without Sb.